

What is claimed is:

1. A power transmission chain comprising:

a first series of links comprising a plurality rows of links positioned adjacent to each other and separated along a chain direction, the rows of the first series of
5 links including:

a guide link and a drive link, the guide link separated from the drive link in a first lateral direction that is perpendicular to the chain direction, and the guide link and the drive link
10 being substantially the same length along the chain direction;

a second series of links comprising a plurality rows of links positioned adjacent to each other and separated along a chain direction, the rows of the second series
15 of links including:

a guide link and a drive link, the guide link separated from the drive link in a second lateral direction that is perpendicular to the chain direction and opposite the first lateral direction,
20 the guide link and the drive link being

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- 34 -

substantially the same length along the chain direction;

the rows of the first series separated along the chain direction by a distance that is less than a length
25 along the chain direction of the links of the second series,

the rows of the second series separated along the chain direction by a distance that is less than a length along the chain direction of the links of the first
30 series;

the first series and the second series interleaved along the chain direction so that a row of links of the second series is positioned between and extending adjacent to links of adjacent rows of the first series
35 and a row of links of the first series is positioned between and extending adjacent to links of adjacent rows of the second series,

the drive link of each interleaved row of the first series extending between the drive link and guide link of
40 each row of the second series adjacent to the drive link of the row of the first series and the drive link of each interleaved row of the second series extending between the drive link and guide link of each row of the first

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series adjacent to the drive link of the row of the
45 second series;

each row of links of the first series being
pivotally connected to each row of the second series
interleaved with the row of the first series at locations
near the ends of the links of the first series along the
50 chain direction where the adjacent rows of the first
series and the second series are interleaved;

each row of links of the second series being
pivotally connected to each row of the first series
interleaved with the row of the second series at
55 locations near the ends of the links of the second series
along the chain direction where the adjacent rows of the
first series and second series are interleaved;

whereby, separations along the chain direction
between ends of drive links of adjacent rows of the first
60 series are adjacent to the drive links of the second
series and separations along the chain direction between
ends of drive links of adjacent rows of the second series
are adjacent to the drive links of the first series and
the guide links of alternate rows along the chain
65 direction are positioned on alternate lateral sides of
the power transmission chain.

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- 36 -

2. A power transmission chain according to claim 1
wherein the drive links each form two teeth that extend
from the link in a front direction that is perpendicular
70 to the chain direction and to the first and second
lateral directions, that are adjacent to each along the
chain direction, and define a region between the teeth to
accept a sprocket tooth.

3. A power transmission chain according to claim 2
75 wherein the guide links extend adjacent to the region
between the teeth of the drive links.

4. A power transmission chain according to claim 1
wherein the interleaved links of each row form apertures
that are aligned in the lateral directions and the
80 interleaved links are pivotally connected by pins
extending through the aligned apertures.

5. A power transmission chain according to claim 2
wherein the drive links define a backside surface
opposite the teeth, the back side surface including two
85 back side drive flanks facing at least in part along the
chain direction, one at a first end of the drive link
along the chain direction and one at a second end of the
drive link opposite the first end along the chain
direction.

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6. A sprocket and power transmission chain comprising:

a sprocket having sprocket teeth extending radially outwardly at an outer surface of the sprocket, the
5 sprocket teeth

arranged in a plurality of series around circumference of the sprocket, with adjacent series offset from each other along a direction generally perpendicular to the series.

10 the teeth of each series separated from adjacent sprocket teeth of the series to accept a drive link of a power transmission chain between adjacent sprocket teeth,

a power transmission chain having a plurality of
15 series of interleaved, pivotally connected drive links, each drive link positioned adjacent to two drive links, one at each opposite end of the drive link along a chain direction,

the chain having a guide link laterally adjacent to
20 and separated from the drive links, so that an interleaved drive link is between the guide link and

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drive link at opposite ends of the drive link along the chain direction; and

25 the power transmission chain engaging the sprocket positioning a first series of drive links engaging a first series of sprocket teeth and a second series of drive links engaging a second series of sprocket teeth.

7. The sprocket and power transmission chain of claim 6, wherein the sprocket has two parallel series of sprocket teeth.

8. The sprocket and power transmission chain of 5 claim 6, wherein the chain further comprises pins pivotally connecting interleaved drive links and guide links.

9. The sprocket and power transmission chain of claim 6, wherein the drive links define a front side and 10 a back side, the front side of a drive link defining two inverted teeth for meshing with a front drive sprocket, the back side of a drive link defining flanks configured so that the back side of the drive link is accepted between adjacent sprocket teeth of a series for meshing 15 with a back drive sprocket.

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10. The sprocket and power transmission chain of
claim 6, wherein the drive links comprise a front side
and a back side, the front side of a drive link
comprising flanks configured so that the front side of
20 the drive link is accepted between adjacent sprocket
teeth for meshing with a front drive sprocket, the back
side of a drive link comprising flanks configured so that
the back side of the drive link is accepted between
adjacent sprocket teeth for meshing with a back drive
25 sprocket.

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